

1

SEQUENCE LISTING

<110> CHOPPIN, JEANNINE
BOURGAULT VILLADA, ISABELLE
GUILLET, JEAN-GERARD
CONNAN, FRANCINE
FERRIES, ESTELLE

<120> POLYPEPTIDIC PROTEIN FRAGMENTS OF THE E6 AND E7
PROTEINS OF HPV, THEIR PRODUCTION AND THEIR USE
PARTICULARLY IN VACCINATION

<130> WO/01/00000 INS

<140> 09/980,523

<141> 2001-12-03

<150> PCT/FR00/01513

<151> 2000-05-31

<150> FR 99/07012

<151> 1999-06-03

<160> 24

<170> PatentIn Ver. 2.1

<210> 1

<211> 477

<212> DNA

<213> Human Papillomavirus

<220>

<221> CDS

<222> (1)..(477)

<400> 1

atg cac caa aag aga act gca atg ttt cag gac cca cag gag cga ccc	48
Met His Gln Lys Arg Thr Ala Met Phe Gln Asp Pro Gln Glu Arg Pro	
1 5 10 15	

aga aag tta cca cag tta tgc aca gag ctg caa aca act ata cat gat	96
Arg Lys Leu Pro Gln Leu Cys Thr Glu Leu Gln Thr Thr Ile His Asp	
20 25 30	

ata ata tta gaa tgt gtg tac tgc aag caa cag tta ctg cga cgt gag	144
Ile Ile Leu Glu Cys Val Tyr Cys Lys Gln Gln Leu Leu Arg Arg Glu	
35 40 45	

gta tat gac ttt gct ttt cgg gat tta tgc ata gta tat aga gat ggg	192
Val Tyr Asp Phe Ala Phe Arg Asp Leu Cys Ile Val Tyr Arg Asp Gly	
50 55 60	

aat cca tat gct gta tgt gat aaa tgt tta aag ttt tac tct aaa att	240
Asn Pro Tyr Ala Val Cys Asp Lys Cys Leu Lys Phe Tyr Ser Lys Ile	
65 70 75 80	

2

Ser Cys Cys Arg Ser Ser Arg Thr Arg Arg Glu Thr Gln Leu
145 150 155

3

<210> 3
 <211> 90
 <212> DNA
 <213> Human Papillomavirus

<220>
 <221> CDS
 <222> (1)..(90)

<400> 3
 cga ccc aga aag tta cca cag tta tgc aca gag ctg caa aca act ata 48
 Arg Pro Arg Lys Leu Pro Gln Leu Cys Thr Glu Leu Gln Thr Thr Ile
 1 5 10 15
 cat gat ata ata tta gaa tgt gtg tac tgc aag caa cag tta 90
 His Asp Ile Ile Leu Glu Cys Val Tyr Cys Lys Gln Gln Leu
 20 25 30

<210> 4
 <211> 30
 <212> PRT
 <213> Human Papillomavirus

<400> 4
 Arg Pro Arg Lys Leu Pro Gln Leu Cys Thr Glu Leu Gln Thr Thr Ile
 1 5 10 15
 His Asp Ile Ile Leu Glu Cys Val Tyr Cys Lys Gln Gln Leu
 20 25 30

<210> 5
 <211> 66
 <212> DNA
 <213> Human Papillomavirus

<220>
 <221> CDS
 <222> (1)..(66)

<400> 5
 cga cgt gag gta tat gac ttt gct ttt cgg gat tta tgc ata gta tat 48
 Arg Arg Glu Val Tyr Asp Phe Ala Phe Arg Asp Leu Cys Ile Val Tyr
 1 5 10 15
 aga gat ggg aat cca tat 66
 Arg Asp Gly Asn Pro Tyr
 20

<210> 6
 <211> 22
 <212> PRT
 <213> Human Papillomavirus

4

<400> 6

Arg Arg Glu Val Tyr Asp Phe Ala Phe Arg Asp Leu Cys Ile Val Tyr
1 5 10 15

Arg Asp Gly Asn Pro Tyr
20

<210> 7

<211> 87

<212> DNA

<213> Human Papillomavirus

<220>

<221> CDS

<222> (1)..(87)

<400> 7

att agt gag tat aga cat tat tgt tat agt ttg tat gga aca aca tta 48
Ile Ser Glu Tyr Arg His Tyr Cys Tyr Ser Leu Tyr Gly Thr Thr Leu
1 5 10 15

gaa cag caa tac aac aaa ccg ttg tgt gat ttg tta att 87
Glu Gln Gln Tyr Asn Lys Pro Leu Cys Asp Leu Leu Ile
20 25

<210> 8

<211> 29

<212> PRT

<213> Human Papillomavirus

<400> 8

Ile Ser Glu Tyr Arg His Tyr Cys Tyr Ser Leu Tyr Gly Thr Thr Leu
1 5 10 15

Glu Gln Gln Tyr Asn Lys Pro Leu Cys Asp Leu Leu Ile
20 25

<210> 9

<211> 66

<212> DNA

<213> Human Papillomavirus

<220>

<221> CDS

<222> (1)..(66)

<400> 9

tgt cct gaa gaa aag caa aga cat ctg gac aaa aag caa aga ttc cat 48
Cys Pro Glu Glu Lys Gln Arg His Leu Asp Lys Lys Gln Arg Phe His
1 5 10 15

aat ata agg ggt cgg tgg 66
Asn Ile Arg Gly Arg Trp
20

5

<210> 10
 <211> 22
 <212> PRT
 <213> Human Papillomavirus

<400> 10
 Cys Pro Glu Glu Lys Gln Arg His Leu Asp Lys Lys Gln Arg Phe His
 1 5 10 15
 Asn Ile Arg Gly Arg Trp
 20

<210> 11
 <211> 297
 <212> DNA
 <213> Human Papillomavirus

<220>
 <221> CDS
 <222> (1)..(297)

<400> 11
 atg cat gga gat aca cct aca ttg cat gaa tat atg tta gat ttg caa 48
 Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln
 1 5 10 15
 cca gag aca act gat ctc tac tgt tat gag caa tta aat gac agc tca 96
 Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn Asp Ser Ser
 20 25 30
 gag gag gag gat gaa ata gat ggt cca gct gga caa gca gaa ccg gac 144
 Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala Glu Pro Asp
 35 40 45
 aga gcc cat tac aat att gta acc ttt tgt tgc aag tgt gac tct acg 192
 Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys Asp Ser Thr
 50 55 60
 ctt cgg ttg tgc gta caa agc aca cac gta gac att cgt act ttg gaa 240
 Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg Thr Leu Glu
 65 70 75 80
 gac ctg tta atg ggc aca cta gga att gtg tgc ccc atc tgt tct cag 288
 Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile Cys Ser Gln
 85 90 95
 aaa cca taa 297
 Lys Pro

<210> 12
 <211> 98
 <212> PRT
 <213> Human Papillomavirus

6

<400> 12

Met His Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln
 1 5 10 15

Pro Glu Thr Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn Asp Ser Ser
 20 25 30

Glu Glu Glu Asp Glu Ile Asp Gly Pro Ala Gly Gln Ala Glu Pro Asp
 35 40 45

Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys Lys Cys Asp Ser Thr
 50 55 60

Leu Arg Leu Cys Val Gln Ser Thr His Val Asp Ile Arg Thr Leu Glu
 65 70 75 80

Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile Cys Ser Gln
 85 90 95

Lys Pro

<210> 13

<211> 69

<212> DNA

<213> Human Papillomavirus

<220>

<221> CDS

<222> (1)..(69)

<400> 13

gga gat aca cct aca ttg cat gaa tat atg tta gat ttg caa cca gag 48
 Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln Pro Glu
 1 5 10 15

aca act gat ctc tac tgt tat 69
 Thr Thr Asp Leu Tyr Cys Tyr
 20

<210> 14

<211> 23

<212> PRT

<213> Human Papillomavirus

<400> 14

Gly Asp Thr Pro Thr Leu His Glu Tyr Met Leu Asp Leu Gln Pro Glu
 1 5 10 15

Thr Thr Asp Leu Tyr Cys Tyr
 20

<210> 15

<211> 51

<212> DNA

<213> Human Papillomavirus

7

<220>

<221> CDS

<222> (1)..(51)

<400> 15

caa gca gaa ccg gac aga gcc cat tac aat att gta acc ttt tgt tgc 48
Gln Ala Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys
1 5 10 15

aag

51

Lys

<210> 16

<211> 17

<212> PRT

<213> Human Papillomavirus

<400> 16

Gln Ala Glu Pro Asp Arg Ala His Tyr Asn Ile Val Thr Phe Cys Cys
1 5 10 15

Lys

<210> 17

<211> 57

<212> DNA

<213> Human Papillomavirus

<220>

<221> CDS

<222> (1)..(57)

<400> 17

ttg gaa gac ctg tta atg ggc aca cta gga att gtg tgc ccc atc tgt 48
Leu Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile Cys
1 5 10 15

tct cag aaa

57

Ser Gln Lys

<210> 18

<211> 19

<212> PRT

<213> Human Papillomavirus

<400> 18

Leu Glu Asp Leu Leu Met Gly Thr Leu Gly Ile Val Cys Pro Ile Cys
1 5 10 15

Ser Gln Lys

<210> 19

<211> 36

8

<212> PRT

<213> Homo sapiens

<400> 19

Thr	Tyr	Gln	Gly	Ser	Tyr	Gly	Phe	Arg	Leu	Gly	Phe	Leu	His	Ser	Gly
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Thr	Ala	Lys	Ser	Val	Thr	Cys	Thr	Tyr	Ser	Pro	Ala	Leu	Asn	Lys	Met
			20					25						30	

Phe	Cys	Gln	Leu
			35

<210> 20

<211> 21

<212> PRT

<213> Homo sapiens

<400> 20

Ser	Thr	Pro	Pro	Pro	Gly	Thr	Arg	Val	Arg	Ala	Met	Ala	Ile	Tyr	Lys
1				5					10					15	

Gln	Ser	Gln	His	Met
				20

<210> 21

<211> 34

<212> PRT

<213> Homo sapiens

<400> 21

Gly	Leu	Ala	Pro	Pro	Gln	His	Leu	Ile	Arg	Val	Glu	Gly	Asn	Leu	Arg
1					5				10					15	

Val	Glu	Tyr	Leu	Asp	Asp	Arg	Asn	Thr	Phe	Arg	His	Ser	Val	Val	Val
			20					25						30	

Pro Tyr

<210> 22

<211> 18

<212> PRT

<213> Homo sapiens

<400> 22

Gly	Ser	Asp	Cys	Thr	Thr	Ile	His	Tyr	Asn	Tyr	Met	Cys	Asn	Ser	Ser
1					5				10					15	

Cys Met

<210> 23

<211> 33

<212> PRT

<213> Homo sapiens

9

<400> 23

Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu Glu Asp Ser Ser Gly Asn
1 5 10 15

Leu Leu Gly Arg Asn Ser Phe Glu Val Arg Val Cys Ala Cys Pro Gly
20 25 30

Arg

<210> 24

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
tetanus toxin peptide sequence

<400> 24

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu Lys
1 5 10 15

Lys